

Stock Assessment and Fishery Evaluation of Skate species (*Rajidae*) in the Gulf of Alaska (Executive Summary)

by
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Introduction

For 2005, GOA skates have been moved to a biennial stock assessment to coincide with new survey data. On alternate (even) years we will present an executive summary in this format. In this document, we update fishery information on skates in the GOA, and refer the reader to the full GOA skate assessment (<http://www.afsc.noaa.gov/refm/docs/2003/GOAskate.pdf>). The next full assessment will occur in 2005.

In 2003, a directed fishery for certain skate species developed in the Gulf of Alaska (GOA). Until 2003, skates were managed as part of the “Other species” category under the GOA FMP, along with other potentially economically important species such as sharks, sculpins, squids, and octopi. In 2004, skates were managed separately from the rest of the Other species category, and big and longnose skates were managed separately from other skate species in the Central GOA.

Summary of Major Changes

There are no changes to ABC or OFL recommendations from last year’s assessment. We present the author’s recommendations, and review last year’s specifications, which are also this year’s proposed specifications. The authors recommend the following Tier 5 ABC and OFL; biomass is averaged across the last three GOA trawl surveys (as presented in the 2003 assessment), and M is estimated as 0.10:

species	area	author OFL 2004	author ABC 2004	specs OFL 2004	specs ABC 2004	specs TAC 2004	catch 2004	author OFL 2005	author ABC 2005	author OFL 2006	author ABC 2006
Big skate	W	969	727					969	727	969	727
	C	3,284	2,463					3,284	2,463	3,284	2,463
	E	1,079	809					1,079	809	1,079	809
Longnose skate	W	88	66					88	66	88	66
	C	2,630	1,972					2,630	1,972	2,630	1,972
	E	1,040	780					1,040	780	1,040	780
Big / Longnose	C				4,435	3,284	1,423				
Bathyraja spp	Gulfwide	1,769	1,327		3,709	3,709	1,385	1,769	1,327	1,769	1,327
All skates*	Gulfwide			10,859			2,808				

Catches of skates this year in the directed fishery were lower in tonnage, but appeared to be similar in composition to those from 2003. Female big skates were dominant in 2004 sampled landings (see ADF&G report and Figure 1, below). While it is thought that effort was reduced in the GOA skate directed fishery in 2004 due to changing market conditions, there was at least one anecdotal report of substantial declines in catch rates relative to 2003. A full investigation of catch rates will be presented in the 2005 assessment using any information available, but it may be difficult to obtain accurate information in an unobserved fleet.

Response to SSC comments

The SSC and Council stated that no directed fishery would be permitted without a data collection program in 2005. Data collection in 2004 was conducted as follows:

Stock Assessment Improvement Program (SAIP) funds were used for port sampling landings data in Kodiak in 2004. They were used to set up a contract with ADF&G to provide a dedicated port sampler. That money was enough to conduct two months of sampling. Due to low effort in the fishery in late 2004, only one month of sampling was conducted. We are in the process of deferring that second month of sampling to early 2005 (March?). ADF&G provided additional funding which was used for collection of mostly biological data (sexed length frequency and vertebrae) opportunistically to other ADF&G port sampling. Assumedly, due to lower prices in the fishery we saw a lot less effort in 2004. The directed fishery was prosecuted by longliners under the observer coverage requirement size. Vessels that targeted skates with trawl gear in 2003 targeted arrowtooth in 2004. Therefore, there was no at sea observer coverage in the directed fishery for skates that we are aware of. Data collection efforts by us in cooperation with ADF&G are the only ones that we are aware of.

If a directed fishery is to continue, we recommend the following management measures be applied to GOA skates in 2005:

- Individual species ABC and OFL for the two current target species of the skate fishery, the big skate (*Raja binoculata*) and the longnose skate (*Raja rhina*).
- Area specific ABC and OFL for big and longnose skates. The species display sensitive life history traits (large size, late maturity, and low fecundity), and the directed fishery is extremely localized, so management measures should follow suit to the extent possible.
- A data collection program adequate to monitor GOA skate catch (landings and discards) by species and area, including monitoring of presently unobserved fleets.
- Genus level ABC and OFL (Gulfwide) for the *Bathyraja* species complex pending the collection of further information. These species are not yet the targets of directed fishing.

Appendix: 2004 Kodiak Area skate sampling summary

by Kally Spalinger, ADF&G

In 2004, 23 vessels delivering skates were sampled. The vessels included both those targeting skates, and those delivering skates as bycatch. All sampled deliveries, except for one skate bycatch delivery, were from federal waters. Samplers funded by ADF&G sampled 16 of the deliveries, and a sampler funded by a grant from NMFS sampled 7 of the deliveries.

ADF&G in Kodiak measures skates from the tip of the snout to the notch of the pectoral fin. Only sampled skates measured in this manner are summarized here.

Raja binoculata – Big Skate
Number measured=599
Female=425=71%
Male=174=29%

Bathyraja aleutica – Aleutian Skate
Number measured=39
Female=18=46%
Male=21=54%

Bathyraja parmifera – Alaska Skate
Number measured=14
Female=8=57%
Male=6=43%

Raja rhina – Longnose Skate
Number measured=186
Female=88=47%
Male=98=53%

Bathyraja interrupta – Bering Skate
Number measured=34
Female=18=53%
Male=16=47%

A total of 240 skate vertebrae were collected. All data is reflective of what was delivered, not necessarily what was caught. Small skates are often discarded at sea.

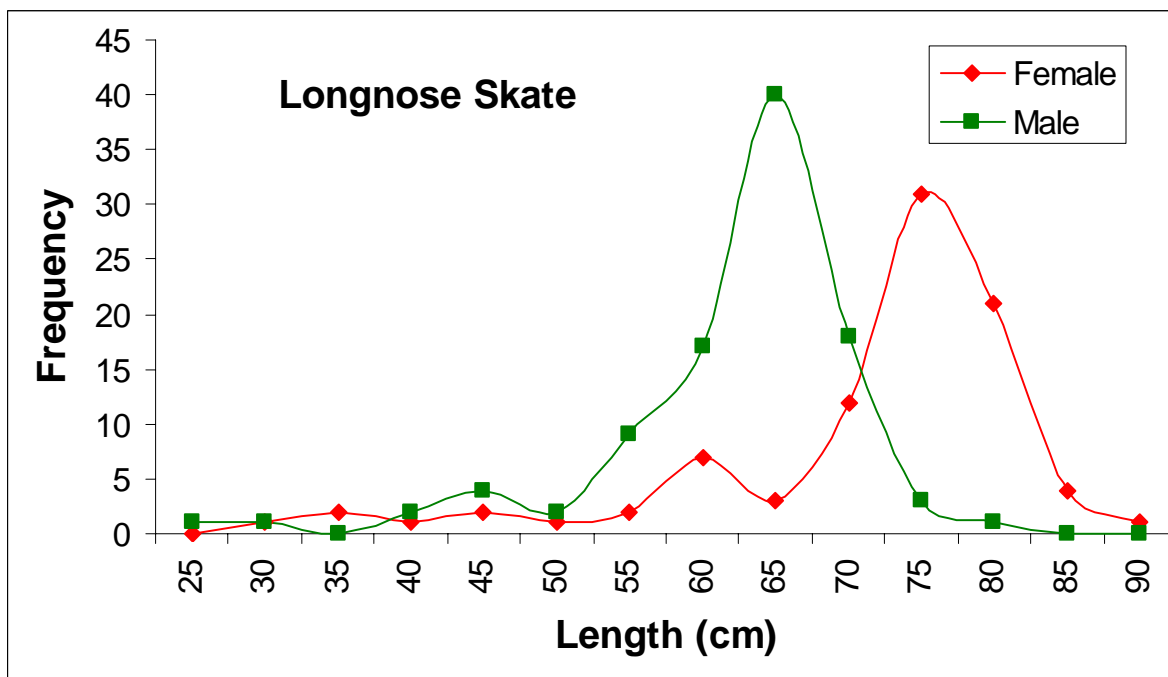
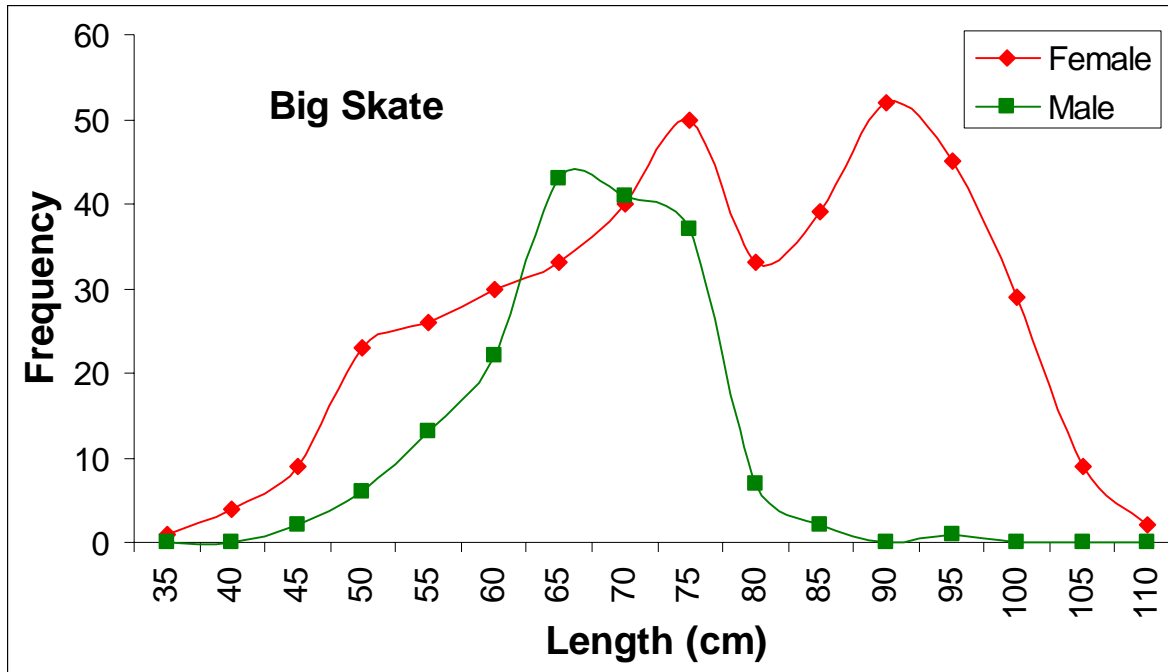


Figure 1. ADF&G length frequency sampling for GOA skate target species, Big skate *Raja binoculata* (above) and Longnose skate *Raja rhina* (below).

Note that these lengths are measured as snout to pectoral fin notch, and are not comparable to total length measurements reported in the previous assessment.

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